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09/774,576	02/01/2001	Seizo Miyazaki	Q62956	2515

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EXAMINER

SY, MARIANO ONG

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/774,576

Applicant(s)

MIYAZAKI, SEIZO

Examiner

Mariano Sy

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-16, 18 and 19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-16, 18 and 19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The amendment filed on November 25, 2003 has been received.
2. The Election of Species requirement is withdrawn by the Examiner.
3. Claims 9 and 14 are objected to because of the following informalities:  
Claim 9, line 3 "boding force" should be --bonding force--  
Claim 14, line 1 "said seal member" should be --said sealing member--.  
Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1-10, 18, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "adapted to a rolling bearing" in line 1. It is unclear what the applicant is referring to.

Claim 1 recites the limitation "said sealing member" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "said sealing member" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Art Unit: 3683

Claims 4-7 recites the limitation "said sealing member" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 5-7 are indefinite due to their dependency on independent claim 1.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 2-4, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saigusa (U.S. Patent Number 5,882,121) in view of Edwards et al. (U.S. Patent Number 5,270,887).

Re-claims 1 and 2-4 Saigusa discloses, as shown in fig. 4, a rolling bearing comprises an inner ring 3, an outer ring 1, and a plurality of rolling elements rotatably disposed and defines a space accommodating said rolling elements and having at least one end part opening opened in an axial direction, and a sealing member 4A comprising: a first portion substantially covering at least a part of the end part opening of the space; a second portion being bonded and fixed to an axial direction extreme endmost surface of one of the inner and outer rings; a sealing material 5, circular or annular in shape, made of for example metal, natural or synthetic rubber, plastics and the like and adhesive material 6.

However Saigusa was failed to disclose the sealing member comprises a core layer and an aluminum or alumina film disposed on said core layer.

Edwards et al. teaches the use of sealing tape 14 comprises a core layer made of polyester and an aluminum foil disposed on the polyester with adhesive backing.

It would have been obvious to one of ordinary skill in the art to have merely use the known sealing tape as the sealing member of Saigusa, in view of the teachings of Edwards et al., in order to prevent contaminants, dusts or particles from passing through either side of the sealing member.

Re-claims 8 and 10 Saigusa was silent to disclose wherein the second portion is bonded and fixed to the axial direction end surface with a predetermined detachable bonding force which is lowerable when the adhesive is heated. It is inherent that any adhesive joint will be detachable by a force that exceed the bonding force of the adhesive or the adhesive joint is detached when subject to heat.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katakura et al. (U.S. Patent Number 6,038,205) in view of Saigusa (U.S. Patent Number 5,882,121).

Re-claim 13 Katakura et al. discloses, as shown in fig. 1, a thin motor comprising: a first member 1 on which a stator 7 is supported and fixed; a second member 4 on which a rotor 5 facing a stator is supported and fixed; and a rolling bearing 2,3 relatively and rotatably combining the second and first member; wherein the outer diameter size of the rotor is seven times or more as much as the axial direction size of the motor as a

Art Unit: 3683

whole, and wherein said rolling bearing comprises, an inner ring; an outer ring; a plurality of rolling elements rotatably disposed therebetween and accommodated with a space which has at least one end part opening opened in the axial direction; and a sealing member 11 including a first portion substantially covering at least a part of the space, and a second portion being fixed to the axial direction end surface of at least one of said inner and outer rings.

However Katakura et al. failed to disclose a sealing member wherein the second portion being bonded to the axial direction end surface of at least one of said inner and outer rings.

Saigusa teaches, as shown in fig. 4, the use of a sealing member 4A that is bonded by use of adhesive to the axial direction end surface of the outer ring of a bearing.

It would have been obvious to one of ordinary skill in the art to the sealing member bonded by use of adhesive to the axial direction end surface of at least one of said inner and outer rings of the bearing of Katakura et al., in view of the teaching of Saigusa, is a matter of design choice with the same intended function of attaching the sealing member to the axial direction end surface of at least one of said inner and outer rings.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katakura et al. (U.S. Patent Number 6,038,205) in view of Saigusa (U.S. Patent Number 5,882,121).

Re-claim 15 Katakura et al. discloses, as shown in fig. 2, a bearing device comprising: an axis side member including a cylindrical part 1b with an inner ring 3 mounted externally, an outward flange part 1 disposed on one end side in the axial direction; a housing 4 including a ring part 4a with an outer ring mounted internally, and an outward flange part disposed on the other end part in the axial direction; a rolling bearing disposed between said axis side member and said housing and having outside surface covered by said outward flange part 1; a sheet 11 covering a gap between inner and outer ring and disposed externally on an endmost side of the other end part in the axial direction of the outer ring.

However Katakura et al. fail to disclose the sheet covering a gap between inner and outer ring and disposed externally on an extreme endmost side of the other end part in the axial direction, the sheet being bonded wherein a detachable bonding force is lowerable when the bonded portion of the sheet is heated.

Saigusa teaches, as shown in fig. 4, the use of a sealing member 4A that is bonded by use of adhesive to the axial direction end surface of the outer ring of a bearing.

It would have been obvious to one of ordinary skill in the art to the sealing member bonded by use of adhesive to the axial direction end surface of the outer ring of the bearing of Katakura et al., in view of the teaching of Saigusa, is a matter of design choice with the same intended function of attaching the sealing member to the axial direction end surface of at least one of said inner and outer rings.

It is inherent that any adhesive joint will be detachable by a force that exceed the bonding force of the adhesive or the adhesive joint is detached when subject to heat.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saigusa in view of Edwards et al. as applied to claim 1 above, and further in view of Yazaki et al. (U.S. Patent Number 5,596,235).

Re-claim 9 Saigusa as modified failed to disclose the adhesive having a predetermined detachable bonding force which is lowerable when the adhesive is subject to an ultraviolet ray irradiation.

Yazaki et al. teaches the use of ultraviolet ray irradiation on adhesive for curing or for detaching.

It would have been obvious to one of ordinary skill in the art to have merely utilized the known ultraviolet ray irradiation on adhesive for detaching on the sealing member of Saigusa as modified, in view of the teaching of Yazaki et al., in order to ease removing of the sealing member from the roller bearing.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katakura et al. in view of Saigusa as applied to claim 13 above, and further in view of Edwards et al. (U.S. Patent Number 5,270,887).

Re-claim 14 Katakura et al. as modified failed to disclose wherein the sealing member comprises a core layer, an aluminum or alumina film disposed on said core layer and an adhesive layer further disposed on said aluminum or alumina film.



Edwards et al. teaches the use of sealing tape 14 comprises a core layer made of polyester and an aluminum foil disposed on the polyester with adhesive backing.

It would have been obvious to one of ordinary skill in the art to have merely use the known sealing tape as the sealing member of Saigusa, in view of the teachings of Edwards et al., in order to prevent contaminants, dusts or particles from passing through either side of the sealing member.

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Katakura et al. in view of Saigusa as applied to claim 13 above, and further in view of Yazaki et al. (U.S. Patent Number 5,596,235).

Re-claim 16 Katakura et al. as modified failed to disclose the adhesive having a predetermined detachable bonding force which is lowerable when the adhesive is subject to an ultraviolet ray irradiation.

Yazaki et al. teaches the use of ultraviolet ray irradiation on adhesive for curing or for detaching.

It would have been obvious to one of ordinary skill in the art to have merely utilized the known ultraviolet ray irradiation on adhesive for detaching on the sealing member of Katakura et al. as modified, in view of the teaching of Yazaki et al., in order to ease removing of the sealing member from the roller bearing.

13. Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katakura et al. in view of Saigusa and in view of Edwards et al.

Art Unit: 3683

Re-claims 18 and 19 Katakura et al. discloses, as shown in fig. 1, a thin motor comprising: a first member 1 on which a stator 7 is supported and fixed; a second member 4 on which a rotor 5 facing a stator is supported and fixed; and a rolling bearing 2,3 relatively and rotatably combining the second and first member; wherein the outer diameter size of the rotor is seven times or more as much as the axial direction size of the motor as a whole.

However Katakura et al. failed to disclosed a rolling bearing according to claim 1.

Saigusa and Edwards et al. teaches a rolling bearing according to claim 1 on page 3, item no. 7.

It would have been obvious to one of ordinary skill in the art to have modified the rolling bearing of Katakura et al., in view of the teachings of Saigusa and Edwards et al., in order to ease removing of the sealing member from the roller bearing.

### ***Response to Arguments***

14. Examiner maintains the rejection is proper.

Applicant on page 8, paragraph 4 of the Remarks recited "For example, in a head disk assembly, there is concern not only for shielding from intrusion of dust particles and the like, but also from electromagnetic intrusion. It is the latter intrusion which gives rise to Edward's use of aluminum in the sealing tape 4."

Edward's sealing tape is used on a drive head disk assembly for contaminant free environment (see col. 5, lines 47-49) and also for avoid possible air leak points

Art Unit: 3683

where separate pieces would have to join and for shielding from electromagnetic interference from external electromagnetic fields (see col. 12, lines 40-45).

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 703-308-3427. The examiner can normally be reached on Mon.-Fri. from 9:00 A.M. to 3:00 P.M.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder, can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-305-7687.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.



M. Sy

January 13, 2004

  
JACK LAVINDER  
SUPERVISOR  
TECHNICAL STAFF